

ARINC Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM 17-012A**
- Prepare two ARINC Standards as follows:**
- ARINC Project Paper 808A** (3GCN Cabin) and **ARINC Project Paper 809A** (3GCN Seats) to define a 3GCN **Plus** architecture capable of supporting multiple aircraft types with fiber optic **and high-speed copper technology**. **New aircraft programs and IFES requires documentation for industry references.**
- Name of Originator and/or Organization**
- Jecelin Peterson**, Boeing
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Chairman**
- Cabin System Subcommittee (CSS)
Dale Freeman, Delta Air Lines
- 2.2 Support for the activity (as verified)**
- Airlines: Delta
Airframe Manufacturers: Boeing, Airbus
Suppliers: Thales, Panasonic, **Safran**
Others:
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**
- Airlines: Delta
Airframe Manufacturers: Boeing, Airbus
Equipment Suppliers: Thales, Panasonic, **Safran**
Others:
- 2.4 Recommended Coordination with other groups**
- FOS, NIS
- 3.0 Project Scope (why and when standard is needed)**
- ARINC 808 and ARINC 809 were developed as the 3GCN standard architecture for the IFE industry. Network technology is evolving and the development of 10 Gbps fiber interfaces provides a growth path for the 3GCN architecture that will support future IFE features such as 4K UHD video to be incorporated to create a 3GCN **Plus** architecture.
- New aircraft developments and IFES architectures require documenting for industry review.**
- 3.1 Description**
- The ARINC 808 and ARINC 809 defined 3GCN architecture will be revised to incorporate a 10 Gbps fiber backbone routed between the head-end IFE equipment and the Area Distribution Boxes that form the cabin network distribution system.

3.2 Planned usage of the envisioned specification

- New aircraft developments planned to use this specification yes no
Specify: 777X, Existing Airbus aircraft
- Modification/retrofit requirement yes no
Specify: 777, 747-8
- Needed for airframe manufacturer or airline project yes no
Specify:
- Mandate/regulatory requirement yes no
Program and date: None
- Is the activity defining/changing an infrastructure standard? yes no
Specify: ARINC 808A and ARINC 809A, 3GCN Plus
- When is the ARINC Standard required? 2019-2021
What is driving this date? Certification of the B777X
- Are 18 months (min) available for standardization work? yes no
If NO, please specify solution: Not applicable
- Are Patent(s) involved? yes no
If YES please describe, identify patent holder: Not applicable

3.3 Issues to be worked

- Incorporation of 10 Gbps fiber (existing scope)
- New outline drawings (LRUs and new connectors)
- New architecture drawings of networks and components
- Pinout tables to be updated
- Validating connector callouts
- Material specific to increased network speeds
 - i.e., 2.5GBASET or higher

4.0 Benefits

4.1 Basic benefits

- Operational enhancements yes no
For equipment standards:
- (a) Is this a hardware characteristic? yes no
(b) Is this a software characteristic? yes no
(c) Interchangeable interface definition? yes no
(d) Interchangeable function definition? yes no
If not fully interchangeable, please explain: _____
- Is this a software interface and protocol standard? yes no
Product offered by more than one supplier yes no
Identify:

4.2 Specific project benefits (Describe overall project benefits.)

The purpose of the project is to **prepare ARINC Project Paper 808A** and **ARINC Project Paper 809A** to incorporate performance enhancements to the 3GCN architecture creating a 3GCN **Plus** architecture that is applicable to multiple aircraft models.

4.2.1 Benefits for Airlines

Airlines will benefit from a revised standardized 3GCN **Plus** architecture that provides an IFES growth platform that supports new features such as 4K UHD video distribution.

4.2.2 Benefits for Airframe Manufacturers

Standardized products from a variety of suppliers applicable to multiple airplane platforms.

4.2.3 Benefits for Avionics Equipment Suppliers

Revision of an existing architecture that incorporates new and existing technology and improves system performance.

5.0 Documents to be Produced and Date of Expected Result

Prepare two new documents:
ARINC Project Paper 808A and ARINC Project Paper 809A

5.1 Meetings and Expected Document Completion

The following table identifies the number of meetings and proposed meeting days needed to produce the documents described above.

Activity	Mtgs*	Mtg-Days (Total)*	Expected Start Date	Expected Completion Date
Supplement 3 to ARINC Project Paper 808A	8	24	Oct 2017	10/2019
Supplement 4 to ARINC Project Paper 809A	18	54		Apr 2022

* Meetings reflect ongoing CSS activities responsible for multiple ARINC Standards.

6.0 Comments

Revision A to this APIM adds 30 months to schedule.

6.1 Expiration Date for the APIM

January ~~2020~~ 2023

Completed forms should be submitted to the AEEC Executive Secretary.